TEXAS DEPARTMENT OF INSURANCE

Engineering Services / MC 103-3A 333 Guadalupe Street P.O. Box 149104 Austin, Texas 78714-9104
Phone No. (512) 322-2212 Fax No. (512) 463-6693

PRODUCT EVALUATION Effective July 1, 2011
WIN-774

*The following product has been evaluated for compliance with the wind loads specified in the **International Residential Code (IRC)** and the **International Building Code (IBC)**. This product shall be subject to reevaluation **September 2013**.*

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code, and the Texas Engineering Practice Act.

Heritage Wood Operating Awning Windows, Individual, Impact Resistant, manufactured by

Kolbe & Kolbe Millwork Co., Inc.
1323 South Eleventh Avenue
Wausau, WI 54401
(715) 842 - 5666

will be acceptable in designated catastrophe areas along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

PRODUCT DESCRIPTION

The wood operating awning windows evaluated in this report are impact resistant. This product evaluation report is for wood operating awning windows based on the following tested constructions:

General Description:

System	Description	Label Rating	Hallmark Certification
1	Heritage Operating Awning; (X); Single Glazed; Missile Level D	AP-C65 48 x 36 CW-PG65 48x36 - AP Negative Design Pressure = 70 psf	413-H-1066.00 413-H-1066.01 413-H-1066.02
2	Heritage Operating Awning; (X); Insulating Glass Unit; Missile Level D	AP-C65 48 x 36 CW-PG65 48 x 36 - AP Negative Design Pressure = 70 psf	413-H-1065.00 413-H-1065.01 413-H-1065.02

Product Dimensions:

System	Overall Size	Sash Size	Glass Size
1	48" x 36"	46 1/16" x 34 1/16"	43 1/4" x 31 1/4"
2	48" x 36"	46 1/16" x 34 1/16"	43 1/4" x 31 1/4"

Glazing Description:

System	Glass Construction [1]	Glazing Method [2]
1	SG-1	GM-1
2	IG-1	GM-1

Note: [1] See the "Glass Construction Key" for the glass construction.
[2] See the "Glazing Method Key" for the glazing method description.

Glass Construction Key:

SG-1: Single glazed with a laminated glass unit. The laminated glass unit is comprised of two $\frac{5}{32}$" annealed glass lites with a 0.090" PVB + 0.007" PET interlayer. The glass thickness used in the tested assembly and in smaller assemblies shall comply with ASTM E 1300-04.

IG-1: Sealed insulating glass units. The sealed insulating glass unit is comprised of a laminated glass unit and a double strength ($\frac{1}{8}$") annealed glass lite that are separated by a desiccant-filled stainless steel spacer system. The laminated glass unit is comprised of two $\frac{5}{32}$" annealed glass lites with a 0.090" PVB + 0.007" PET interlayer. The glass thickness used in the tested assembly and in smaller assemblies shall comply with ASTM E 1300-04.

Glazing Method Key:

GM-1: The glass units are set from the interior onto a bed of structural silicone sealant. Another interior bead of structural silicone sealant is applied at the interior edge of the glass unit around the perimeter and a vinyl bracket is installed into the kerfs in the sash. Along the interior, wood glazing stops are secured with brads spaced 1 inches from each end and 6 inches on center.

Frame Construction: The frame members consist of molded pine. The frame corners are rabbeted, butted, sealed with silicone, and secured with staples. Interior wood stops are secured at the head and side jambs with staples. The brickmould is secured to the side jambs and to the head with autonail wires or T-nails. The brickmould is mitered and secured with two nails per corner. The sill nosing is secured to the brickmould with one screw per corner and to the frame sill with glue and T-nails. A full length wood operator cover is secured to the sill with T-nails.

Sash Construction: The sash members consist of molded maple with a pine veneer wrap. The sash corners are open mortise and tenon construction, glued, and secured with screws.

Hardware:

- Ashland 1-point lock system with adjacent keepers; Two (2) required; Located on the right and left side jambs and the sash stiles.
- Tri-Euro hinges; Three (3) required; Located on the frame head and the sash top rail.
- Truth Encore roto operator with track; One (1) required; Located at the center of the frame sill and the sash bottom rail.

Product Identification: A certification program label (WDMA Hallmark Certified) will be affixed to the assembly. The certification program label includes the manufacturer's name; product name; performance characteristics; the approved inspection agency (WDMA); and the following applicable standards: AAMA/WDMA 101/I.S.2/A440-05, AAMA/WDMA 101/I.S.2/A440-08, and ASTM E 1886 and ASTM E 1996. **Higher Negative Design Pressure:** The WDMA Hallmark Certified label indicates the product was tested to a higher negative design pressure.

LIMITATIONS

Design pressures (DP):

System	Overall Width (in.)	Overall Height (in.)	Design Pressure (psf)
1	48	36	+65/-70
2	48	36	+65/-70

Impact Resistance: These assemblies satisfy the Texas Department of Insurance's criteria for protection from windborne debris in the **Inland I zone** and the **Seaward zone**. The assemblies passed Missile Level D specified in ASTM E 1996-05. The assemblies may be installed at any height on the structure as long as the design pressure rating for the assemblies is not exceeded. These assemblies will not need to be protected with an impact protective system.

Higher Negative Design Pressure: The WDMA Hallmark Certified label indicates the product was tested to a higher negative design pressure. The higher negative design pressure is indicated in the table above.

Acceptance of Smaller Assemblies: Assemblies with dimensions equal to or smaller than those specified above are acceptable within the limitations specified in this report.

INSTALLATION INSTRUCTIONS

General: The assembly shall be prepared and installed in accordance with the manufacturers recommended installation instructions. Detailed installation instructions and drawings are available from the manufacturer.

Installation:

Option 1 (Installation Clips): The assembly shall be fastened to minimum Southern Yellow Pine lumber. The assembly is secured to the wall framing using Kolbe & Kolbe metal installation clips. The installation clips (20 gauge x 10 1/16" x 1 5/8") are secured to the frame side jambs, head, and sill. The clips are secured to the frame with two (2) No. 8 x 3/4" screws. The clips are secured to the wall framing with one (1) No. 8 x 1 3/4" screw. The fasteners shall be long enough to penetrate a minimum of 1 1/4" into the wall framing. Along each side jamb, the clips shall be spaced 18 inches from each corner. Along the head and the sill, the clips shall be spaced 16 inches from each corner and 16 inches on center. The brickmould is secured to the wall framing with 2" long T-nails spaced 16 inches on center.

Option 2 (Frame Installation): The assembly shall be fastened to minimum Southern Yellow Pine lumber. The assembly is secured to the wall framing with minimum No. 10 x 2 1/2" screws. Along the head, sill, and each side jamb, the fasteners shall be spaced approximately 12 inches from each corner and approximately 12 inches on center. The fasteners shall be long enough to penetrate a minimum of 1 1/4" into the wall framing. The brickmould is secured to the wall framing with 2" long T-nails spaced 16 inches on center.

Note: The manufacturer's installation instructions shall be available on the job site during installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC), the International Building Code (IBC), and the Texas Revisions.